

REMARKS

The Office Action of June 19, 2002, has been carefully considered.

Objection has been raised to the drawings on the basis the every claimed feature is not shown. Applicants believe that every claimed feature has been shown in the drawings, as will be discussed below.

The features of claim 28 are shown in Figure 7, including outer sections 68, 70 of the lateral legs 56, 58 penetrating a wall which is an intermediate wall 14 but which could be a ground wall 12 having the identical appearance.

The features of claim 24 are shown in Figs. 4 and 5, with a first, outer section 40 running along wall 16 which extends from ground wall 12; outer section 40 runs around the circumference of wall 16, and crosses over into center section 36 perpendicular to first section 40. Opposite to the first section 40, there is a second section 47 fitting into guide 34 extending from the ground wall.

The features of claims 24 and 28 are thus shown explicitly or implicitly in the drawings.

Objection has also been raised to the drawings on the basis that they fail to show how the cover makes the retaining element disengage the brush, and how spring element 45 exerts a force on the brush.

The disengagement of the brush is shown clearly in Figs. 4 and 5. The brush is retained in Fig. 4 by pin 42 engaged in a recess 44 of the brush. When the cover is moved in the direction of the base plate, it pushes against first section 40, pressing the second section 47 against the spring 48, releasing the pin from the recess, shown in Fig. 5.

The operation of the device shown in Figs. 12 and 13 is exactly as shown in the drawings and described in the second complete paragraph on page 7 of the specification. Thus, a spring 46 which forms part of the brush apparatus acts on retaining element in a lateral direction, rather than the longitudinal direction of spring 48 as in Figs. 4 and 5. The retaining walls 30 and 32 in Fig. 12 are perpendicular to the walls shown in Figs. 4 and 5, and include protrusions 99, shown in Fig. 13, which interact with grooves 98 in retaining wall 26 to correctly position the retaining wall, and enable the retaining wall to slide longitudinally along groove 98. When a cover presses down on upper edge 50, sliding along the groove causes pin 42 to be released from the brush assembly.

In light of the above explanations, removal of the objections under 37 CFR 1.83(a) is requested.

Claims 20-27 have been rejected under 35 USC 112, 1<sup>st</sup> paragraph.

Claim 20 has been amended to specify that the longitudinal axis is that of the carbon brush. Support for

claims 20 and 21 is found generally in the substitute specification at page 2, lines 18-23.

In claim 24, support for the opposite side is found in the substitute specification at page 3, lines 3-10.

Withdrawal of this rejection is requested.

Claims 18-32 have been rejected under 35 USC 112, 2<sup>nd</sup> paragraph, on a number of grounds.

In claim 18 the "support plate" is the base plate, and the claim has now been corrected.

With regard to the carbon brush, the brushes 22 can be seen in Fig. 1. These brushes can be seen clearly to have a length which defines the longitudinal direction, and this longitudinal direction remains constant, regardless of the point of view.

The objection to claim 19 is not understood, since the claim itself defines a removable cover. The mounting of the cover causes the spring to become disengaged, as shown in Figs. 4 and 5, by a mechanism which has already been discussed.

Claim 20 has been amended to define the longitudinal axis as that of the carbon brush, as discussed above.

Claim 21 has been amended to clarify that a pin or extension becomes engaged in a recess of the brush.

In claim 24, there is a first section shown as 40 in Figs. 4 and 5, and a base section 36 which is clearly perpendicular to the first section; these sections have an "L"

shape. The second section is designated 47, and is parallel to the first section.

Claim 28 recites that the brush guide may be mounted to the ground wall 12 or to an intermediate wall 14. These are two embodiments of the same invention.

Claim 29 has been canceled, and its recitations incorporated into claim 28. The recitations have been amended to clarify that the outer section runs *in part* parallel to the ground or intermediate wall. This does not mean that the outer section is slanted, but rather that at least a portion of the section is parallel.

Claim 30 recites that a section is parallel to a wall, and a section passes through the wall; the claim has been amended to better define the wall. This embodiment is shown in Fig. 7.

Claim 32 represents the embodiments shown in Figs. 8 and 9, and has also been incorporated into claim 28, clarifying that the legs are fastened to a surface of a wall which faces away from the carbon brush. This wall may be the intermediate wall or the ground wall, these being equivalent embodiments which would be shown in an identical manner in the drawings.

Withdrawal of this rejection is requested.

Claim 18 has been rejected under 35 USC 103 over Concannon in view of Lindner.

Concannon discloses a brush holding apparatus for a

dynamoelectric machine, in which carbon brushes have grooves N in which clips R are engaged for fixing the carbon brushes, which are moved perpendicular to the base plate of the holder. For releasing the carbon brushes, clips R must be bent using a screw driver (col. 3, lines 40 et seq).

Lindner discloses a retaining element 4 which moves between positions releasing and retaining a brush. The brush is released when the temperature exceeds a predetermined value, utilizing a temperature sensitive memory element acting as a lever.

However, even if one of ordinary skill in the art were to make such a combination, the result would not be the claimed invention, since Lindner does not utilize a retaining element slidably supported by the base plate in a direction perpendicular to the longitudinal axis of the carbon brushes. The retaining element of Lindner swivels or bends but does not slide in a guide, as does the retaining element of the invention.

Withdrawal of this rejection is requested.

Claims 20, 22 and 23 have been rejected under 35 USC 103 over Concannon and Lindner in view of Redick.

Redick has been cited to show a brushes 100 and 102 held in a retracted position by rod member 108, which is effectively a key to be pulled out of the housing of the dynamoelectric machine for releasing the brushes. Redick does

not disclose or suggest removal of the rod by a retaining element activated by a spring biased against a base plate. Clearly, Concannon also does not disclose such an arrangement. The arrangement disclosed by Lindner is limited to prevention of overheating, and there is no reason why one of ordinary skill in the art would substitute the arrangement of Redick for that of Lindner.

Withdrawal of this rejection is requested.

Claim 21 has been rejected under 35 USC 103 over Concannon, Lindner and Redick, in view of Blank.

Blank has been cited to show a brush holder utilizing a spring which exerts a force on a retaining element 22. However, Blank utilizes a lever 22 fitted with a projection 26 retaining the outer wall of brush 5. While lever 22 is movable, it is not movable perpendicular to the longitudinal axis of the carbon brush. Moreover, there is no guide in the base plate in which the lever is movable.

Withdrawal of this rejection is requested.

Claims 28-32 have been rejected under 35 USC 103 over Gingerich et al in view of Prell et al.

Claim 28 has been amended to incorporate the recitations of claims 29 and 32, which have now been canceled.

Gingerich et al has been cited to show a U-shaped brush guide, while Prell et al has been cited to show mounting of a

brush guide 24 with walls parallel to base and intermediate walls.

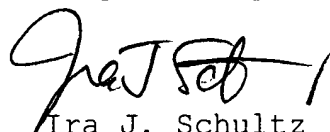
However, the mounting means of Prell et al is eyelets 28 attached to a parallel wall which is on top of the ground or intermediate wall, on the brush side of the wall. Claim 28 has been amended to specifically recite that the outer sections penetrate the ground or intermediate wall, and are attached to the opposite surface of the ground or intermediate wall, facing away from the brush, thus clearly distinguishing over the arrangement shown in Prell et al.

Withdrawal of this rejection is requested.

The allowability of claims 19 and 24-27 has been noted.

In view of the foregoing amendments and remarks, Applicants submit that the present application is now in condition for allowance. An early allowance of the application with amended claims is earnestly solicited.

Respectfully submitted,



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